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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2	Apr 08	"Ask CAS" for self-help around the clock
NEWS	3	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS	4	Apr 09	ZDB will be removed from STN
NEWS	5	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS	6	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS	7	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS	8	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS	9	Jun 03	New e-mail delivery for search results now available
NEWS	10	Jun 10	MEDLINE Reload
NEWS	11	Jun 10	PCTFULL has been reloaded
NEWS	12	Jul 02	FOREGE no longer contains STANDARDS file segment
NEWS	13	Jul 22	USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS	14	Jul 29	Enhanced polymer searching in REGISTRY
NEWS	15	Jul 30	NETFIRST to be removed from STN
NEWS	16	Aug 08	CANCERLIT reload
NEWS	17	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS	18	Aug 08	NTIS has been reloaded and enhanced
NEWS	19	Aug 19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS	20	Aug 19	IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS	21	Aug 19	The MEDLINE file segment of TOXCENTER has been reloaded
NEWS	22	Aug 26	Sequence searching in REGISTRY enhanced
NEWS	23	Sep 03	JAPIO has been reloaded and enhanced
NEWS	24	Sep 16	Experimental properties added to the REGISTRY file
NEWS	25	Sep 16	Indexing added to some pre-1967 records in CA/CAPLUS
NEWS	26	Sep 16	CA Section Thesaurus available in CAPLUS and CA
NEWS	27	Oct 01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS	28	Oct 21	EVENTLINE has been reloaded
NEWS	29	Oct 24	BEILSTEIN adds new search fields
NEWS	30	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS	31	Oct 25	MEDLINE SDI run of October 8, 2002
NEWS	32	Nov 18	DKILIT has been renamed APOLLIT
NEWS	33	Nov 25	More calculated properties added to REGISTRY
NEWS	34	Dec 02	TIBKAT will be removed from STN
NEWS	35	Dec 04	CSA files on STN
NEWS	36	Dec 17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS	37	Dec 17	TOXCENTER enhanced with additional content
NEWS	38	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS EXPRESS			October 14 CURRENT WINDOWS VERSION IS V6.01, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
NEWS HOURS			STN Operating Hours Plus Help Desk Availability
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NEWS WWW CAS World Wide Web Site (general information)

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=> file agricola caplus biosis
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FILE 'AGRICOLA' ENTERED AT 16:01:12 ON 24 DEC 2002

FILE 'CAPLUS' ENTERED AT 16:01:12 ON 24 DEC 2002
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FILE 'BIOSIS' ENTERED AT 16:01:12 ON 24 DEC 2002
COPYRIGHT (C) 2002 BIOLOGICAL ABSTRACTS INC. (R)

=> s ppo or protoporphyrinogen
L1 5240 PPO OR PROTOPORPHYRINOGEN

=> s l1 and plant?
L2 1229 L1 AND PLANT?

=> s l2 and herbicide
L3 285 L2 AND HERBICIDE

=> s l3 and oxidase
L4 266 L3 AND OXIDASE

=> s l4 and chlamydomonas
L5 13 L4 AND CHLAMYDOMONAS

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6 10 DUP REM L5 (3 DUPLICATES REMOVED)

=> d 1-10 ti

L6 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2002 ACS
TI **Herbicide-resistant transgenic plants** having
protoporphyrinogen IX oxidase inhibitor binding
activity, and use in weed control

L6 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2002 ACS
TI A method for evaluating the ability of a compound to inhibit the
protoporphyrinogen oxidase activity

L6 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2002 ACS

TI Transgenic **plants** tolerant of herbicidal inhibitors of porphyrin biosynthesis

L6 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2002 ACS

TI Methods of conferring resistance to herbicides inhibiting **protoporphyrinogen** biosynthesis to crop **plants**

L6 ANSWER 5 OF 10 AGRICOLA DUPLICATE 1

TI Isolation and characterization of a mutant **protoporphyrinogen oxidase** gene from **Chlamydomonas reinhardtii** conferring resistance to porphyric herbicides.

L6 ANSWER 6 OF 10 AGRICOLA DUPLICATE 2

TI Characterization of a mutant of **Chlamydomonas reinhardtii** resistant to **protoporphyrinogen oxidase** inhibitors.

L6 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2002 ACS

TI Isolation and characterization of a **Chlamydomonas reinhardtii** mutant resistant to photobleaching herbicides

L6 ANSWER 8 OF 10 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

TI Mode of action studies on a chiral diphenyl ether peroxidizing **herbicide**: Correlation between differential inhibition of **protoporphyrinogen IX oxidase** activity and induction of tetrapyrrole accumulation by the enantiomers.

L6 ANSWER 9 OF 10 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

TI Isolation and characterization of a **Chlamydomonas reinhardtii** mutant resistant to an experimental **herbicide** S-23142, which inhibits chlorophyll synthesis.

L6 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2002 ACS

TI Treatment of polycythemia vera or hyperbilirubinemia with inhibitors of **protoporphyrinogen** conversion to heme

=> d so

L6 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2002 ACS

SO Jpn. Kokai Tokkyo Koho, 66 pp.
CODEN: JKXXAF

=> d pi

L6	ANSWER 1 OF 10	CAPLUS	COPYRIGHT 2002 ACS		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001190168	A2	20010717	JP 2000-328811	20001027

=> d 2 pi

L6	ANSWER 2 OF 10	CAPLUS	COPYRIGHT 2002 ACS		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 955380	A2	19991110	EP 1999-107037	19990409
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	AU 9923649	A1	19991021	AU 1999-23649	19990408
	JP 11346787	A2	19991221	JP 1999-102534	19990409
	US 6472164	B1	20021029	US 1999-289180	19990409
	US 2002086395	A1	20020704	US 2001-978709	20011018

=> d 2 ab

L6 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2002 ACS

AB It is known that compds. which inhibit the **plant**-derived **protoporphyrinogen oxidase (PPO)** activity have generally herbicidal activity. The present invention relates to a method for evaluating the ability of a compd. to inhibit the **PPO** activity. The method comprises the steps of: (1) culturing a transformant expressing a **PPO** gene present in a DNA fragment in a medium contg. substantially no protoheme compds. in each comparative system of the presence and absence of a test compd. to measure a growth rate of the transformant under each condition, said transformant being resulted from a host cell deficient in the growing ability based on the **PPO** activity transformed with the DNA fragment in which a promoter functionable in the host cell and a **protoporphyrinogen oxidase** gene are operatively linked, and (2) detg. the ability of the compd. to inhibit the **PPO** activity by comparing the growth rates; and the like.

=> d 3 so

L6 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2002 ACS

SO Eur. Pat. Appl., 119 pp.
CODEN: EPXXDW

=> d 3 pi

L6 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2002 ACS

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 953646	A2	19991103	EP 1999-108463	19990430
	EP 953646	A3	20000906		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	AU 9923867	A1	19991125	AU 1999-23867	19990421
	AU 753020	B2	20021003		
	ZA 9902837	A	20001023	ZA 1999-2837	19990421
	JP 2000312586	A2	20001114	JP 1999-121955	19990428
	CN 1236010	A	19991124	CN 1999-105300	19990430
	BR 9902056	A	20000509	BR 1999-2056	19990430

=> d 3 ab

L6 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2002 ACS

AB Methods of developing **plants** resistant to inhibitors of porphyrin biosynthesis used as herbicides in weed control are described. The methods use involve expression or over expression of genes for derivs. of porphyrin biosynthetic enzymes that can bind the **herbicide** but that are not enzymically active. The Rhodobacter sphaeroides bchH gene and the **protoporphyrinogen oxidase** gene of soybean were cloned and expressed in Escherichia coli. Expression of these genes in Escherichia coli increased the growth rate in the presence of an unspecified inhibitor of porphyrin biosynthesis. Expression of the bchH gene in tobacco was shown to increase resistance to inhibitors of porphyrin biosynthesis. A deletion variant of the tobacco homolog of the bchH gene product was also shown to have a protective effect.

=> d 4 ab

L6 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2002 ACS
 AB Genes for **herbicide-resistant** variants of **protoporphyrinogen oxidase** are described for use in creating **herbicide-resistant crop plants**. Resistance to these herbicides should allow for simpler and more effective weed management, and increase the value of these herbicides for agricultural use. The **Chlamydomonas reinhardtii** gene for **protoporphyrinogen oxidase** is identified and **herbicide-resistance** alleles created. **Protoporphyrinogen oxidase** genes of **Chlamydomonas reinhardtii** and **Arabidopsis thaliana** were cloned by complementation of a hemG mutant of **Escherichia coli**. In addn., the present invention provides methods to evaluate the inhibitory effects of test compds. on **protoporphyrinogen oxidase** activity, as well as methods to identify **protoporphyrinogen oxidase** inhibitors among test compds. Preferred cloned DNA fragments encoding **protoporphyrinogen oxidase** enzymes resistant to porphyrinic herbicides are also described.

=> d 4 pi

L6	ANSWER 4 OF 10 CAPLUS COPYRIGHT 2002 ACS					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
	-----	---	----	-----	-----	
PI	WO 9829554	A1	19980709	WO 1996-US20415	19961227	
	W: AU, CA, JP, US					
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
	AU 9714298	A1	19980731	AU 1997-14298	19961227	
	AU 739948	B2	20011025			
	EP 1007703	A1	20000614	EP 1996-944519	19961227	
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
	JP 2002528036	T2	20020827	JP 1998-529941	19961227	

=> d 5 pi

'PI' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):so

L6	ANSWER 5 OF 10 AGRICOLA	DUPLICATE 1
SO	Plant molecular biology, Nov 1998. Vol. 38, No. 5. p. 839-859	
	Publisher: Dordrecht : Kluwer Academic Publishers.	
	CODEN: PMBIDB; ISSN: 0167-4412	

=> d 5 ti

L6	ANSWER 5 OF 10 AGRICOLA	DUPLICATE 1
TI	Isolation and characterization of a mutant protoporphyrinogen oxidase gene from Chlamydomonas reinhardtii conferring resistance to porphyrinic herbicides.	

=> d 6 ab

L6	ANSWER 6 OF 10 AGRICOLA	DUPLICATE 2
AB	A nuclear mutant of Chlamydomonas reinhardtii (rs-3) is resistant to several herbicides which inhibit the enzyme protoporphyrinogen oxidase (Protox) in plants,	

including S-23142 [N-(4-chloro-2-fluoro-5-propargyloxy)-phenyl-3,4,5,6-tetrahydrophthalimide], acifluorfenethyl, oxyfluorfen, and oxadiazon. Protox enzyme activity in Percoll-purified chloroplast thylakoids from rs-3 is less sensitive to S-23142 than that from wild type, indicating that the rs-3 mutation either directly or indirectly confers resistance on the enzyme. Genetic analysis of rs-3 showed that resistance results from a single dominant nuclear mutation that maps to linkage group IX, 13.7 and 12.3 map units from sr-1 and pf-16 respectively. Efforts to identify the resistance gene from a cosmic library of rs-3 nuclear DNA by transformation have yielded one S-23142 resistant isolate from the cell wall-less arginine-requiring strain CC-425 (arg-2, cw-15). Since no isolates resistant to S-23142 were seen in control experiments, this suggests that the resistant isolate is a transformant and that the rs-3 gene can be isolated by screening individual cosmic clones by transformation.

=> d 6 so

L6 ANSWER 6 OF 10 AGRICOLA DUPLICATE 2
 SO ACS symposium series, 1994. No. 559. p. 91-104
 Publisher: Washington, D.C. : American Chemical Society, 1974-
 CODEN: ACSMC8; ISSN: 0097-6156

=> d 7 so

L6 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2002 ACS
 SO Zeitschrift fuer Naturforschung, C: Journal of Biosciences (1993),
 48(3-4), 339-44
 CODEN: ZNCBDA; ISSN: 0341-0382

=> d 9 ti

L6 ANSWER 9 OF 10 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 TI Isolation and characterization of a *Chlamydomonas reinhardtii*
 mutant resistant to an experimental herbicide S-23142, which
 inhibits chlorophyll synthesis.

=> d 9 so

L6 ANSWER 9 OF 10 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 SO Murata, N. [Editor]. (1992) pp. 567-570. Research in photosynthesis, Vol.
 III.
 Publisher: Kluwer Academic Publishers PO Box 989, 3300 AZ Dordrecht,
 Netherlands.
 Meeting Info.: IXth International Congress on Photosynthesis Nagoya, Japan
 August 30-September 4, 1992
 ISBN: 0-7923-2073-5 (set), 0-7923-2092-1 (vol. iii).

=> s l4 and transgenic

L7 35 L4 AND TRANSGENIC

=> dup rem 1

ENTER L# LIST OR (END):l7

'L' IS NOT VALID. VALID FILE NAMES ARE 'AGRICOLA, CAPLUS, BIOSIS'
 You have entered a file name of duplicates to keep that is not
 referenced by any of the L#s specified for this DUPLICATE command.
 The file names of duplicates that can be kept are listed above.
 Please enter one of these file names.

=> dup rem l7
 PROCESSING COMPLETED FOR L7
 L8 29 DUP REM L7 (6 DUPLICATES REMOVED)

=> s l8 and valine
 L9 2 L8 AND VALINE

=> d 1-2 ti

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
 TI Plant genes for **protoporphyrinogen** oxidases and the development of **herbicide**-resistant forms of the enzyme

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS
 TI Genes encoding **herbicide** inhibitor-resistant mutants of **plant protoporphyrinogen oxidase** and **transgenic plants** expressing same

=> d so

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
 SO U.S., 95 pp., Cont.-in-part of U.S. Ser. No. 59,164.
 CODEN: USXXAM

=> d pi

L9	ANSWER 1 OF 2	CAPLUS	COPYRIGHT 2002	ACS		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 6084155	A	20000704	US 1998-102420	19980622	
	US 5767373	A	19980616	US 1995-472028	19950606	
	US 5939602	A	19990817	US 1997-808931	19970228	
	US 6018105	A	20000125	US 1997-808323	19970228	
	US 6023012	A	20000208	US 1998-50603	19980330	
	US 6308458	B1	20011030	US 2000-497698	20000203	

=> d 2 pi

L9	ANSWER 2 OF 2	CAPLUS	COPYRIGHT 2002	ACS		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 5939602	A	19990817	US 1997-808931	19970228	
	US 5767373	A	19980616	US 1995-472028	19950606	
	US 6018105	A	20000125	US 1997-808323	19970228	
	US 6023012	A	20000208	US 1998-50603	19980330	
	US 6084155	A	20000704	US 1998-102420	19980622	
	US 6308458	B1	20011030	US 2000-497698	20000203	
	US 2001016956	A1	20010823	US 2000-730525	20001205	
	US 2002073443	A1	20020613	US 2000-730917	20001205	

=> d 1-2 ab

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
 AB The present invention provides novel DNA sequences coding for **protoporphyrinogen oxidase** (protox) enzymes from soybean, wheat, cotton, sugar beet, oilseed rape, rice, sorghum, and sugar cane. In addn., the present invention teaches modified forms of protox enzymes that are **herbicide** tolerant. **Plants** expressing **herbicide** tolerant protox enzymes taught herein are also provided. These **plants** may be engineered for resistance to

protox inhibitors via mutation of the native protox gene to a resistant form or they may be transformed with a gene encoding an **herbicide** tolerant form of a **plant** protox enzyme. CDNAs for the enzymes were cloned by heterologous probing using cDNAs for **protoporphyrinogen** oxidases from corn and Arabidopsis. The genes could complement a hemG mutant of Escherichia coli and conferred **herbicide** sensitivity on the host. Resistant mutations were obtained by random mutagenesis and screening and the amino acids identified as playing a role in resistance were further examd. by site-directed mutagenesis. Expression of the gene for a resistant form of the enzyme in **transgenic** Arabidopsis resulted in **plants** resistant to sprays of **oxidase**-inhibiting herbicides.

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS
 AB The present invention provides novel DNA sequences coding for **plant protoporphyrinogen oxidase** (protox) enzymes from soybean, wheat, cotton, sugar beet, grape, rice and sorghum. In addn., the present invention teaches modified forms of protox enzymes that are **herbicide** tolerant. **Plants** expressing **herbicide** tolerant protox enzymes taught herein are also provided. These **plants** may be engineered for resistance to protox inhibitors via mutation of the native protox gene to a resistant form or they may be transformed with a gene encoding an inhibitor-resistant form of a **plant** protox enzyme.

=> s 14 and (390 or 365 or 389)
 L10 4 L4 AND (390 OR 365 OR 389)

=> dup rem l10
 PROCESSING COMPLETED FOR L10
 L11 2 DUP REM L10 (2 DUPLICATES REMOVED)

=> d 1-2 ti

L11 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
 TI Genes encoding **herbicide** inhibitor-resistant mutants of **plant protoporphyrinogen oxidase** and transgenic **plants** expressing same

L11 ANSWER 2 OF 2 AGRICOLA DUPLICATE 1
 TI Isolation and characterization of a mutant **protoporphyrinogen oxidase** gene from Chlamydomonas reinhardtii conferring resistance to porphyric herbicides.

=> d 1-2 so

L11 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
 SO U.S., 83 pp., Cont.-in-part of U.S. 5,767,373.
 CODEN: USXXAM

L11 ANSWER 2 OF 2 AGRICOLA DUPLICATE 1
 SO Plant molecular biology, Nov 1998. Vol. 38, No. 5. p. 839-859
 Publisher: Dordrecht : Kluwer Academic Publishers.
 CODEN: PMBIDB; ISSN: 0167-4412

=> d pi

L11	ANSWER 1 OF 2	CAPLUS	COPYRIGHT 2002	ACS
	PATENT NO.	KIND	DATE	APPLICATION NO. DATE
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PI	US 5939602	A	19990817	US 1997-808931 19970228

US 5767373	A	19980616	US 1995-472028	19950606
US 6018105	A	20000125	US 1997-808323	19970228
US 6023012	A	20000208	US 1998-50603	19980330
US 6084155	A	20000704	US 1998-102420	19980622
US 6308458	B1	20011030	US 2000-497698	20000203
US 2001016956	A1	20010823	US 2000-730525	20001205
US 2002073443	A1	20020613	US 2000-730917	20001206

WEST Search History

DATE: Tuesday, December 24, 2002

<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
side by side			result set
<i>DB=USPT; PLUR=YES; OP=ADJ</i>			
L7	L6 and dna fragment	12	L7
L6	L5 and (fragment or portion)	12	L6
L5	L4 and chlamydomonas	12	L5
L4	L3 and transgenic	70	L4
L3	l1 and plant	287	L3
L2	L1 and herbicide	68	L2
L1	ppo or protoporphyrinogen oxidase	2566	L1

END OF SEARCH HISTORY